

5' NGA ACT CTA ATA CGA GCA CTA TAG GGA AAG CTG GTA GCC TGC AGG TAC CGG TCC
 9 18 27 36 45 54
 GGA ATT CCC GGG TCG ACC CAC GCG TCC GCC GTG CCC TTG GGG CTC CGT GTC CTG
 63 72 81 90 99 108
 CTG TCT TTC CGT CCG CTG CCT AGT CTG CAT CTG AGT AAC ATG GCG GCG GCG GCG
 117 126 135 144 153 162
 M A A A A
 GTA GCC AGG CTG TGG TGG CCG GGG ATC TTG GGG GCC TCG GCG CTG ACC AGG GCG
 171 180 189 198 207 216
 V A R L W W R G I L G A S A L T R G
 ACT GGG CGA CCC TCC GTT CTG TTG CTG CCG GTG AGG CGG GAG AGC GCC GGG GCC
 225 234 243 252 261 270
 T G R P S V L L L P V R R E S A G A
 GAC ACG CGC CCC ACT GTC AGA CCA CGG AAT GAT GTG GCC CAC AAG CAG CTC TCA
 279 288 297 306 315 324
 D T R P T V R P R N D V A H K Q L S
 GCT TTT GGA GAG TAT GTG GCT GAA ATC TTG CCC AAG TAT GTC CAA CAA GTT CAG
 333 342 351 360 369 378
 A F G E Y V A E I L P K Y V Q Q V Q
 GTG TCC TGC TTC AAT GAG TTA GAG GTC TGT ATC CAT CCT GAT GGC GTC ATC CCA
 387 396 405 414 423 432
 V S C F N E L E V C I H P D G V I P
 GTG CTG ACT TTC CTC AGG GAT CAC ACC AAT GCA CAG TTC AAA TCT CTG GTT GAC
 441 450 459 468 477 486
 V L T F L R D H T N A Q F K S L V D
 TTG ACA GCA GTG GAC GTC CCA ACT CGG CAA AAC CGT TTT GAG ATT GTC TAC AAC
 495 504 513 522 531 540
 L T A V D V F T R Q N R F E I V Y N
 CTG TTG TCT CTG CGC TTC AAT TCA CGG ATC CGT GTG AAG ACC TAC ACA GAT GAG
 549 558 567 576 585 594
 L L S L R F W S R I R V K T Y T D E

FIGURE 1A

CTG	ACG	603	CCC	ATT	GAG	612	TCT	GCT	GTC	621	TCT	GTG	TTC	630	AAG	GCA	GCC	639	AAC	TGG	TAT	648	GAA
L	T	P	I	E	S	A	V	S	V	F	K	A	A	N	W	Y	E						
AGG	GAG	657	ATC	TGG	GAC	666	ATG	TTT	GGA	675	GTC	TTC	TTT	684	GCT	AAC	CAC	693	CCT	GAT	CTA	702	AGA
R	E	I	W	D	M	F	G	V	F	F	A	N	H	P	D	L	R						
AGG	ATC	711	CTG	ACA	GAT	720	TAT	GGC	TTC	729	GAG	GGA	CAT	738	CCT	TTC	CGG	747	AAA	GAC	TTT	756	CCT
R	I	L	T	D	Y	G	F	E	G	H	P	F	R	K	D	F	P						
CTA	TCT	765	GGC	TAT	GTT	774	GAG	TTA	CGT	783	TAT	GAT	GAT	792	GAA	GTG	AAG	801	CGT	GTG	GTG	810	GCA
L	S	G	Y	V	E	L	R	Y	D	D	E	V	K	R	V	V	A						
GAG	CCG	819	GTG	GAG	TTG	828	GCC	CAA	GAG	837	TTC	CGC	AAA	846	TTT	GAC	CTG	855	AAC	AGC	CCC	864	TGG
E	P	V	E	L	A	Q	E	F	R	K	F	D	L	N	S	P	W						
GAG	GCT	873	TTC	CCA	GTC	882	TAT	CGC	CAA	891	CCC	CCG	GAG	900	AGT	CTC	AAG	909	CTT	GAA	GCC	918	GGA
E	A	F	P	V	Y	R	Q	P	P	E	S	L	K	L	E	A	G						
GAC	AAG	927	AAG	CCT	GAT	936	GCC	AAG	TAG	945	CTC	CAG	GGA	954	ACG	CAT	GTG	963	GAT	CCT	AGA	972	CAG
D	K	K	P	D	A	K																	
CGC	CTT	981	ATC	TAT	GAT	990	TGA	GTG	TCC	999	GTG	TAA	ATA	1008	AAT	TCC	TAC	1017	TTA	GAC	TTA	C	3'

FIGURE 1B

5' NCC AAG ATG TCG TTC CCA AAG TAT AAG CCG TCG AGC CTG CGC ACT CTG CCT GAG
 9 18 27 36 45 54
 M S F P K Y K P S S L R T L P E

ACC CTC GAC CCA GCC GAA TAC AAC ATA TCT CCG GAA ACC CGG CGG GCG CAA GCG
 63 72 81 90 99 108
 T L D P A E Y N I S P E T R R A Q A

GAG CGG TTG GCC ATA AGA GCC CAG CTG AAA CGA GAG TAC CTG CTT CAG TAC AAC
 117 126 135 144 153 162
 E R L A I R A Q L K R E Y L L Q Y N

GAT CCC AAC CGC CGA GGG CTC ATC GAA AAT CCT GCC TTG CTT CGT TGG GCC TAT
 171 180 189 198 207 216
 D P N R R G L I E N P A L L R W A Y

GCA AGA ACA ATA AAT GTC TAT CCT AAT TTC AGA CCC ACT CCT AAA AAC TCA CTC
 225 234 243 252 261 270
 A R T I N V Y P N F R P T P K N S L

ATG GGA GCT CTG TGT GGA TTT GGG CCC CTC ATC TTC ATT TAT TAT ATT ATC AAA
 279 288 297 306 315 324
 M G A L C G F G P L I F I Y Y I I K

ACT GAG AGG GAT AGG AAA GAA AAA CTT ATC CAG GAA GGA AAA TTG GAT CGA ACA
 333 342 351 360 369 378
 T E R D R K E K L I Q E G K L D R T

TTT CAC CTC TCA TAT TAA GTC TGG CAA TGA TGA CTA TAT GTA TTC CTG CCT AAA
 387 396 405 414 423 432
 F H L S Y

TAA ATC ATC TAT TAA TCA TT 3'

FIGURE 2

5' NNA GCT AGT CGT TCT GAA GCG GCG GCC AGA GAA GAG TCA AGG GCA CGA GCA TCG
 9 18 27 36 45 54
 GCC ATG CCT TTC TTG GAC ATC CAG AAA AGG TTC GGC CTT AAC ATA GAT CGA TGG
 63 72 81 90 99 108
 M P F L D I Q K R F G L N I D R W
 TTG ACA ATC CAG AGT GGT GAA CAG CCC TAC AAG ATG GCT GGT CGA TGC CAT GCT
 117 126 135 144 153 162
 L T I Q S G E Q P Y K M A G R C H A
 TTT GAA AAA GAA TGG ATA GAA TGT GCA CAT GGA ATC GGT TAT ACT CGG GCA GAG
 171 180 189 198 207 216
 F E K E W I E C A H G I G Y T R A E
 AAA GAG TGC AAG ATA GAA TAT GAT GAT TTC GTA GAG TGT TTG CTT CGG CAG AAA
 225 234 243 252 261 270
 K E C K I E Y D D F V E C L L R Q K
 ACG ATG AGA CGT GCA GGT ACC ATC AGG AAG CAG CGG GAT AAG CTG ATA AAG GAA
 279 288 297 306 315 324
 T M R R A G T I R K Q R D K L I K E
 GGA AAG TAC ACC CCT CCA CCT CAC CAC ATT GGC AAG GGG GAG CCT CGG CCC TGA
 333 342 351 360 369 378
 G K Y T P P P H H I G K G E P R P
 ACA GAG CAG CTG CTG ATG TCT GGA GGC TGA TTT TCC TGT TCT CTG TTC TCC ACT
 387 396 405 414 423 432
 GGA AAG GTT GTT TAC GAC AAA CCT CCT TGT CAA AGT GTG T 3'
 441 450 459 468

FIGURE 3

5' CGC AGA GGA GGA GGA GAA AGC TGA CCG CTT AGG CCC GGG TAG TGG TCG TCG TGG

TTT TCC TTG TAG TTC GTG GTC TGA GAC CAG GCC TCA AGT GGA AAC GGC GTC ACC

ATG ATC GCA CGG CGG AAC CCA GAA CCC TTA CGG TTT CTG CCG GAT GAG GCC CGG
M I A R R N P E P L R F L P D E A R

AGC CTG CCC CCG CCC AAG CTG ACC GAC CCG CGG CTC CTC TAC ATC GGC TTC TTG
S L P P P K L T D P R L L Y I G F L

GGC TAC TGC TCC GGC CTG ATT GAT AAC CTG ATC CGG CGG AGG CCG ATC GCG ACG
G Y C S G L I D N L I R R R P I A T

GCT GGT TTG CAT CGC CAG NTT NTA TAT ATT ACG GCC TTT TTT TTT GCT GGA TAT
A G L H R Q X X Y I T A F F F A G Y

TAT NTT GTA AAA CGT GAA GAC TAC CTG TAT GCT GTG AGG GAC CGT GAA ATG TTT
Y X V K R E D Y L Y A V R D R E M F

GGA TAT ATG AAA TTA CAT CCA GAG GAT TTT CCT GAA GAA GAT AAG AAA ACA TAT
G Y M K L H P E D F P E E D K K T Y

GGT GAA ATT TTT GAA AAA TTC CAT CCA ATA CGT TGA AGT CTT CAA AAT GCT TGC
G E I F E K F H P I R

TCC AGT TTC ACT GAT ACC TGC TGT TTC TGA ATT TGA TGG AAC ATG TTT CTT ATG

ACA GTT GAA GCT TAT GCT AAT CTG TAT GTT GAC ACC 3'

FIGURE 4

1	MAAA	VA	RL	W	-	-	WR	GI	LG	AS	AL	TR	GT	GR	PS	V	L	L	L	P	V	R	R	E	S	NDS-1															
1	MAAA	VA	AA	AA	P	G	C	W	Q	R	L	V	G	S	AA	PA	AR	VA	GR	PS	V	L	L	L	P	V	R	R	E	S	g163416										
39	AG	AD	TR	PT	VR	PR	ND	VA	HK	Q	L	SA	FG	EY	VA	E	I	L	P	K	Y	V	Q	Q	V	Q	V	NDS-1													
41	SA	AD	TR	PT	VR	PR	ND	VA	HK	Q	L	SA	FG	EY	VA	E	I	L	P	K	Y	V	Q	Q	V	Q	V	g163416													
79	SC	FN	EL	EV	CI	HP	DG	VI	P	V	L	T	F	L	R	D	H	T	NA	Q	F	K	S	L	V	D	L	T	A	V	D	NDS-1									
81	SC	FN	EL	EV	CI	HP	DG	VI	P	V	L	T	F	L	R	D	H	T	NA	Q	F	K	S	L	V	D	L	T	A	V	D	g163416									
119	V	P	T	R	Q	N	R	F	E	I	V	Y	N	L	S	L	R	F	N	S	R	I	R	V	K	T	Y	T	D	E	L	T	P	I	E	S	A	V	S	NDS-1	
121	I	P	T	R	Q	N	R	F	E	I	V	Y	N	L	S	L	R	F	N	S	R	I	R	V	K	T	Y	T	D	E	L	T	P	I	E	S	S	V	P	g163416	
159	V	F	K	A	A	N	W	Y	E	R	E	I	W	D	M	F	G	V	F	F	A	N	H	P	D	L	R	R	I	L	T	D	Y	G	F	E	G	H	P	F	NDS-1
161	V	Y	K	A	A	N	W	Y	E	R	E	I	W	D	M	F	G	V	F	F	A	N	H	P	D	L	R	R	I	L	T	D	Y	G	F	E	G	H	P	F	g163416
199	R	K	D	F	P	L	S	G	Y	V	E	L	R	Y	D	D	E	V	K	R	V	V	A	E	P	V	E	L	A	Q	E	F	R	K	F	D	L	N	S	P	NDS-1
201	R	K	D	F	P	L	S	G	Y	V	E	L	R	Y	D	D	E	V	K	R	V	V	A	E	P	V	E	L	A	Q	E	F	R	K	F	D	L	N	S	P	g163416
239	W	E	A	F	P	V	Y	R	Q	P	P	P	E	S	L	K	L	E	A	G	D	K	K	P	D	A	K	NDS-1													
241	W	E	A	F	P	A	Y	R	Q	P	P	P	E	S	L	K	L	E	A	G	D	T	K	P	E	A	K	g163416													

FIGURE 5

1	M	S	F	P	K	Y	K	P	S	S	L	R	T	L	P	E	T	L	D	P	A	E	Y	N	I	S	P	E	T	R	R	A	Q	A	E	R	L	A	I	R	NDS-2
1	M	S	F	P	K	Y	E	A	S	R	L	S	S	L	P	T	T	L	D	P	A	E	Y	D	I	S	S	E	T	R	K	A	Q	A	E	R	L	A	I	R	g114
41	A	Q	L	K	R	E	Y	L	L	Q	Y	N	D	P	N	R	R	G	L	I	E	N	P	A	L	L	R	W	A	Y	A	R	T	I	N	V	Y	P	N	F	NDS-2
41	S	R	L	K	R	E	Y	Q	L	Q	Y	D	P	S	R	R	G	V	I	E	D	P	A	L	V	R	W	T	Y	A	R	S	A	N	I	Y	P	N	F	g114	
81	R	P	T	P	K	N	S	L	M	G	A	L	C	G	F	G	P	L	I	F	I	Y	Y	I	I	K	T	E	R	D	R	K	E	K	L	I	Q	E	G	K	NDS-2
81	R	P	N	T	K	T	S	L	L	G	A	L	F	G	I	G	P	L	V	F	W	Y	Y	V	F	K	T	D	R	D	R	K	E	K	L	I	Q	E	G	K	g114
121	L	D	R	T	F	H	L	S	Y																														NDS-2		
121	L	D	R	T	F	N	I	S	Y																														g114		

FIGURE 6

1	M	I	A	-	R	R	N	P	E	P	L	R	F	L	P	D	E	A	R	S	L	P	P	P	K	L	T	D	P	R	L	L	Y	I	G	F	L	G	Y	C	NDS-4		
1	M	M	T	G	R	Q	G	R	A	T	F	Q	F	L	P	D	E	A	R	S	L	P	P	P	P	K	L	T	D	P	R	L	L	A	F	V	G	F	L	G	Y	C	g582
40	S	G	L	I	D	N	L	I	R	R	R	P	I	A	T	A	G	L	H	R	Q	X	X	Y	I	T	A	F	F	A	G	Y	Y	X	V	K	R	E	D	NDS-4			
41	S	G	L	I	D	N	A	I	R	R	R	P	V	L	L	A	G	L	H	R	Q	L	L	Y	I	T	S	F	V	F	V	G	Y	Y	L	L	K	R	Q	D	g582		
80	Y	L	Y	A	V	R	D	R	E	M	F	G	Y	M	K	L	H	P	E	D	F	P	E	E	D	K	K	T	Y	G	E	I	F	E	K	F	H	P	I	R	NDS-4		
81	Y	M	Y	A	V	R	D	H	D	M	F	S	Y	I	K	S	H	P	E	D	F	P	E	K	D	K	K	T	Y	G	E	V	F	E	F	H	P	V	R	g582			

19 20 21

FIGURE 9B

The graph displays a time series with a clear upward trend and increasing variance. The x-axis ranges from 1 to 129, and the y-axis ranges from -2 to 2. The data starts near 0, fluctuates, and then shows a significant increase in variance and a sharp drop around x=80, followed by a peak around x=105 and a final drop.

FIGURE 10B

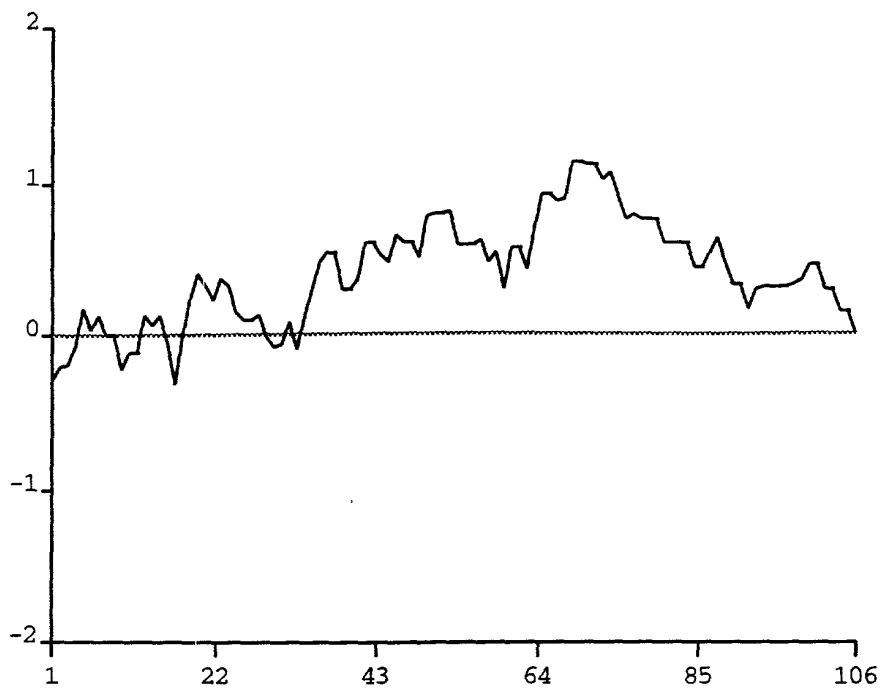


FIGURE 11A

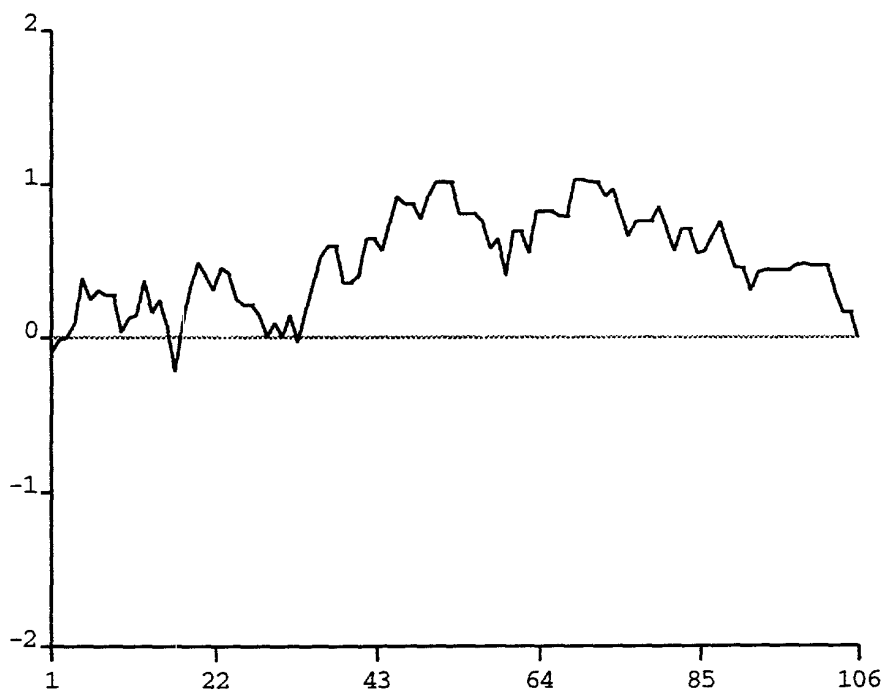


FIGURE 11B

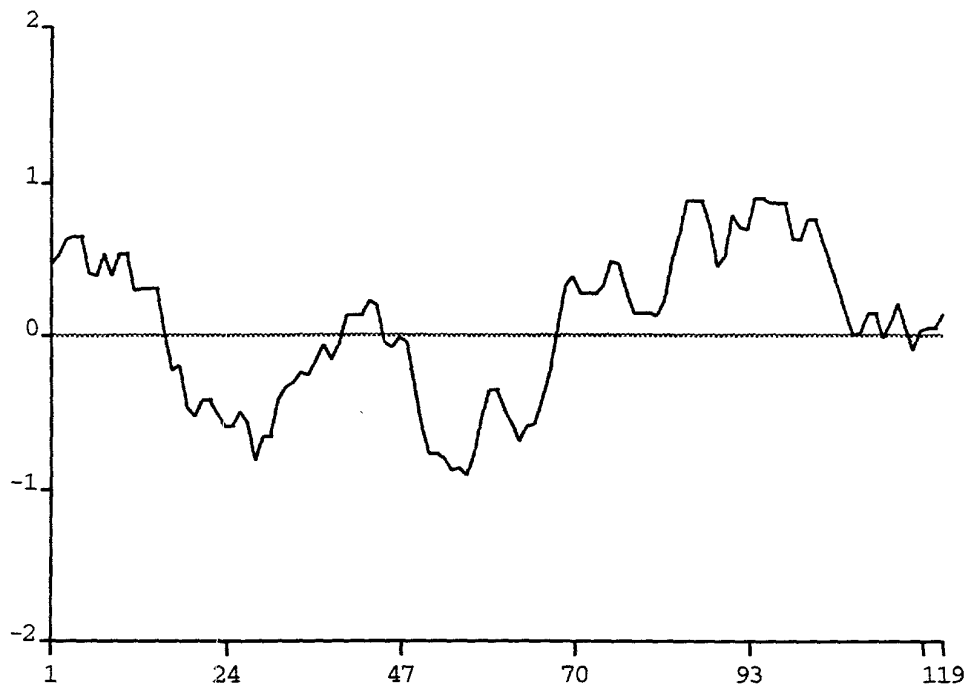


FIGURE 12A

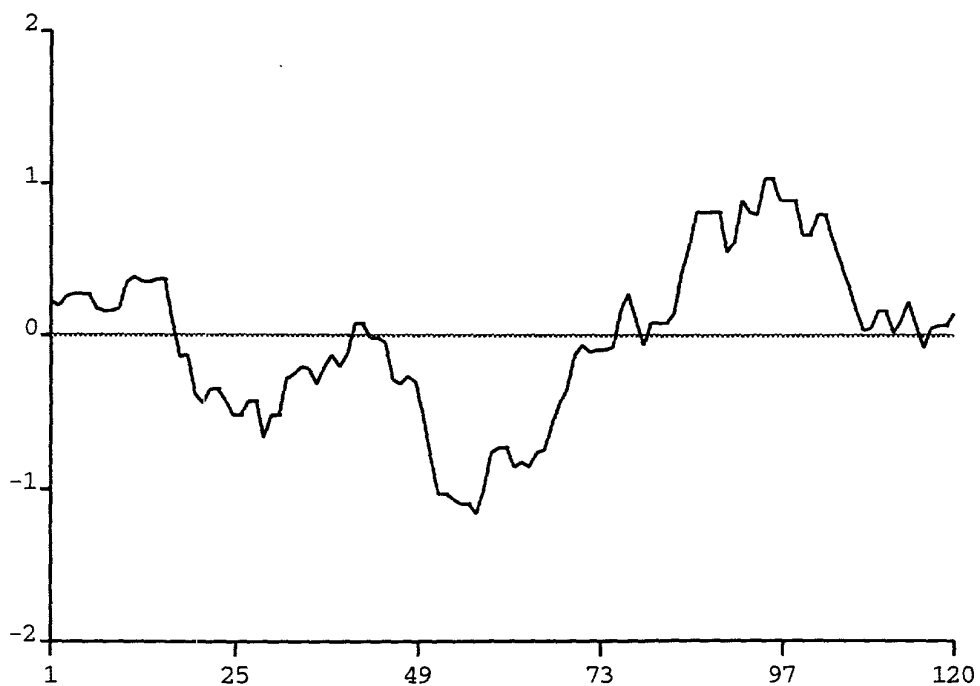


FIGURE 12B